

REMARKS

General Comments

The primary art pieces are Stauffer, Pike, Sheu, and Chang (Sheu and Chang are cited in a related application). We are sure that our disclosures disclose material with distinct differences and advantages over the cited references. Although we have understood our claims in a more narrow sense than the Examiner now does in this Office Action, we have modified/narrowed elements of the independent claims to clarify the differences between the present invention and the prior disclosures. The modified claim 20 removes from relevance the prior art pieces cited that describe continuous processes.

Claim 20 has been amended and its allowability is discussed below. Dependent claims are allowable for at least the reason of their dependence upon claim 20. Claim 40 and its independent claims have been cancelled. Applicant request withdrawal of the rejection with regard to claim 20 and its dependent claims.

Regarding Stauffer:

Stauffer is geared towards a continuous process and this is of course seen in its figures showing showerheads. Stauffer also maintains the process chamber pressure during this continuous process. Because of this Stauffer could not maintain the passageway between the vapor chamber and process chamber open during the process, as recited in claim 20, as amended. Stauffer depends upon a pressure differential to maintain flow. Also, although Stauffer may remove some of the liquid from a first liquid reservoir, it creates a second one in the module 11. It does not determine a volume of liquid for the process and then send that to the vapor chamber. The vapor chamber appears to be kept full at a certain

level, and continuously refilled to this level, regardless of the ultimate volume need of the process.

The use of both a manometer and a valve to control inputs for silane input in an area where there is hot silane vapor has disadvantages. Even under the best of circumstances hot silane vapor will negatively impact manometers and valves, if not immediately then in the long run, impacting both process performance and presenting maintenance issues.

Regarding Pike:

Pike discusses some dehydration, but using “a hot plate or infrared lamp oven”. First, these steps imply moving the wafer to a separate area. Second, there is the implication that wafers are heated one at a time (which seems a consistent theme in this patent – one at a time processing at each stage) which is a limitation not seen in the present application. The description of dehydration in the dependent claims allows for multi-wafer processing. In fact, we have sent the Examiner photos of racks of wafers in this unit (per this invention), a methodology that cannot be performed using the heat methods described in Pike.

In sum, we assert that no cited art discloses claim 20, as amended. Further, due to the continuous process nature of the cited art, the cited art could not be modified to read on claim 20 without being no longer suitable for its intended original purpose.

Respectfully submitted,

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